Patron
Passive Elektronic

PPR/NDR-U75-XS Series

DESCRIPTION: **75-76.8W AC-DC DIN RAIL Power Supply**

The rated output power of PPR/NDR-U75-XS series is 75-76.8W,input voltage range：90-264VAC, output voltage : 12V, 24V, 48V,High reliability, precision,effificency , ultra-small size, stable output voltage and etc., with short circuit & overload protection, Widely used in telecommunications, industrial control, instrument, data acquisition, signal control , New Energy, Security,and other electronic systems.

FEATURES

AC input ： 90VAC-264VAC,DC input:127-370VDC	High efficiency up to 88%	Operating temperature：-20℃~70℃
Mounting track: TS-35/7.5 or TS-35/15	Protection:short circuit,over-load,over-voltage,over-temperature	Mini width: 45mm
RoHS complaint	High reliability,effificency,100% full load burn-in test	Built-in current limiting circuit capacitors

SELECTION GUIDE

Part Number	Input Volatge			Output				Efficiency @25℃, (Typ) %
	(VAC)		(VDC)	Voltage (VDC)	Pre-set voltage @25℃(V)	Current (A)	Rated power(W)	
	Rated	Range	Range					
PPR/NDR-U75-12S	220	90-264	127-370	12	12.00-12.10	6.25	75	82
PPR/NDR-U75-24S	220	90-264	127-370	24	24.00-24.20	3.2	76.8	87
PPR/NDR-U75-48S	220	90-264	127-370	48	48.0-48.40	1.6	76.8	87

All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

without Built-in active PFC

OUTPUT CHARACTERISTICS

Conditions	Conditions	Parameter
Output voltage regulation	12V output voltage	12-14V
	24V output voltage	24-28V
	48V output voltage	48-56V
Rated Output current	12V output voltage	6.25A at 12V
		5.4A at 14V
	24V output voltage	3.2A at 24V
		4.5A at 28V
	48V output voltage	1.6A at 48V
		1.34A at 56V
Rated Output power	12V output voltage	75W/12V , 75.6W/14V
	24V output voltage	76.8W/24V , 77W/28V
	48V output voltage	76.8W/48V , 80W/56V
Ripple&Noise0＜Ta≤70℃	12V 24V output voltage	120mVp-p
	48V output voltage	240mVp-p
Ripple&Noise-20＜Ta≤0℃	12V 24V output voltage	240mVp-p
	48V output voltage	480mVp-p
Capacitive load capacity	12V output voltage	5000uF
	24V output voltage	3500uF
	48V output voltage	1000uF
Line regulation @-20~70℃	±0.5%	
Load regulation @-20~70℃	±1%	
Temp. coefficient @-20~70℃	±0.03%/℃	
Set-up time @25℃	≤2500mS@115Vac input ≤1200mS@(230Vac input, Full load)	
Hold-up time @25℃	≥10mS@115Vac input ≥20mS@(230Vac input, Full load)	
Overshoot&Undershoot	<5.0%	

INPUT CHARACTERISTICS

Conditions	Parameter
Rated Input voltage range	100VAC~240 VAC
Input voltage range	90VAC~264 VAC
input voltage range	127VDC-370VDC
Frequency Range	47Hz~63Hz
Set-up voltage @-20~70℃	90 VAC （refer to the derating curve） ＜120VDC at 12V 48V ,＜127VDC at 24V
Input current @25℃	＜2A/115VAC at 12V 24V ; ＜2A/100VAC at 48V
	0.72A/127VDC 0.31A/300VDC at 12V ; 0.64A/140VDC 0.29A/300VDC at 24V 48V
Inrush current @25℃	＜20A@115 Vac input ＜35A@230Vac input

PROTECTION @-20～70℃

Conditions	Parameter	Notes
Over-Load （12Voutput）	7~9.5A	Limit output current Protection type: Constant current
Over-Load （24Voutput）	5.25~6.5A	
Over-Load （48Voutput）	1.76~2.08A	
Over-voltage（12Voutput）	15~18V	Protection type: Shut down, re-power on.
Over-voltage（24Voutput）	29~33V	
Over-voltage（48Voutput）	58~63V	
Over-temperature	100±5℃, detect on heat sink of power transistor; shut down O/P, re-power on.	
Output short circuit protection	Long-term model , auto recovery	

ENVIRONMENT CHARACTERISTICS

Conditions	Parameter
Operating amb. Temp.&Humi. (12V output)	-20℃~70℃; 20%~90%RH No condensing 45℃~70℃ 2.5W/℃ derating
Operating amb. Temp.&Humi. (24V output)	-20℃~70℃; 20%~90%RH No condensing 60℃~70℃ 1.5W/℃ derating
Operating amb. Temp.&Humi. (48V output)	-20℃~70℃; 20%~90%RH No condensing 110VAC 50℃~70℃ 0.75W/℃derating,230VAC 55℃~70℃1W/℃ derating
Storage Temp. & Humi.	-40℃~85℃; 5%~95%RH No condensing
Vibration	10 ~ 500Hz, 2G，10min./1cycle, period for60min. each along X,Y, Z axes IEC 60068-2-6
Pulse	20G/11mS pulse ,3 times at each X,Y,Z axes IEC 60068-2-27
Altitude	6000m

SAFETY&EMC STANDARDS @25℃

Conditions	Parameter
Safety Standards	GB4943 ,EN60950 (for reference)
Withstand Voltage	12V : I/P-O/P:3.0KVac/10mA; I/P-FG:2KVac/10mA; O/P-FG:0.5KVdc/10mA test time:1min. 24V48V : I/P-O/P:3.0KVac/10mA; I/P-FG:1.5KVac/10mA; O/P-FG:0.5KVdc/20mA test time:1min.
Isolation resistance	12V : I/P-O/P: 10M ohms; I/P-FG : 10M ohms; O/P-FG : 10M ohms 24V48V : I/P-O/P: 100M ohms; I/P-FG : 100M ohms; O/P-FG : 100M ohms
Grounding test	Test condition：32A / 1min.；Grounding resistance：<0.1 ohms.
Leakage Current @ 25℃	I/P-Grounding≤3.5mA； I/P-O/P ≤0.25mA (264Vac input， 63Hz)
EMC emission	Compliance to EN55022, EN55024, FCC PART 15 CLASS B
EMC immunity	Compliance to EN61000-4-2,3,4,5,6,11 heavy industry level
Harmaonic current	EN61000-3-2，CLASS A

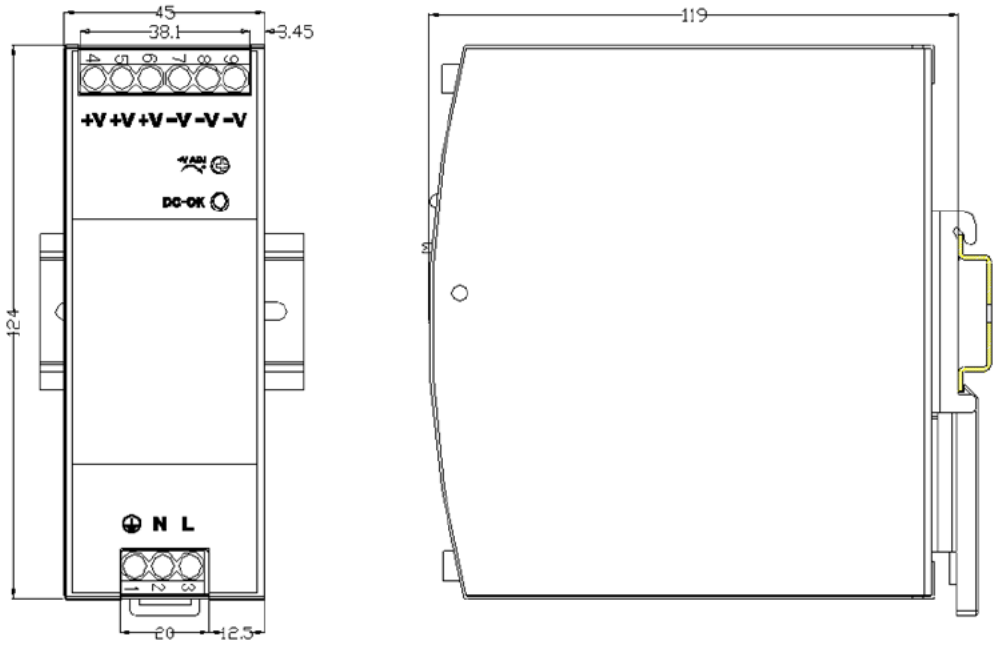
OTHERS

Conditions	Parameter
Cooling method	Cooling by free air flow
Dimension (L*W*H)	45*124*119mm
Net Weight	0.59kg
Series function	yes
DC OK LED	Green light

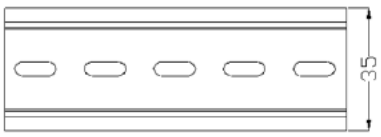
RELIABIILITY CHARACTERISTICS

Conditions	Parameter
MTBF	500，000Hrs AT 25℃, MIL-217 Method 2 Components Stress Method

MECHANICAL DIMENSIONS



1.AC terminal blocks installation information			
Terminal No.	Function	Wire Spec	Recommended torque
1	⏚	20~10AWG	5Nm
2	N		
3	L		

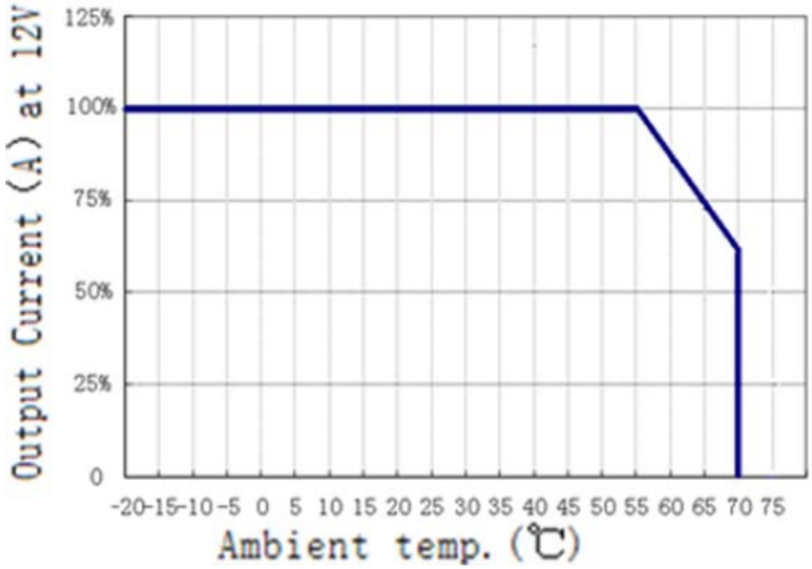


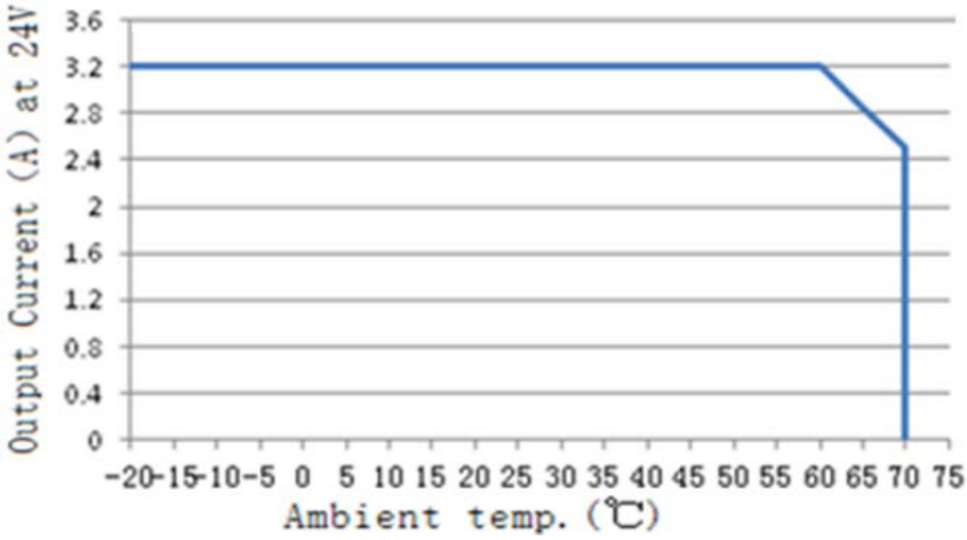
Mounting way: TS35/7.5 or TS35/15

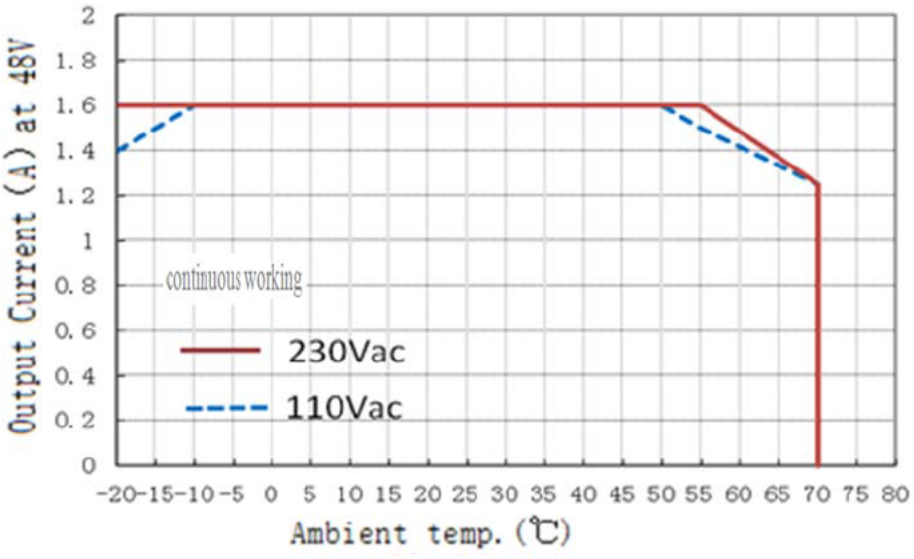
2.DC terminal blocks installation information			
Terminal No.	Function	Wire Spec	Recommended torque
4 /5/6	+V	20~10AWG	5Nm
7/8/9	-V		

	AC/DC Terminal blocks
Type	Screw terminal blocks
Solid Wire	0.5-6mm^2
Strand Wire	0.5-4mm^2
Wire Spec	AWG20-10
Max Wire Diameter	2.8mm
Recommended stripping length	7mm
Screwdriver	3.5mm Straight or Cross Screwdriver
Recommended Torque	0.5NM

DERATING CURVE





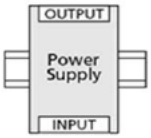


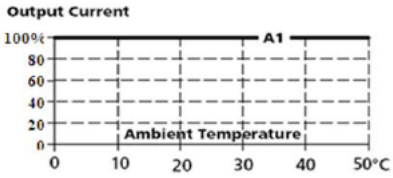
MOUNTING METHOD INSTRUCTION

A1 is recommended output current , A2 is he allowed max output current (PSU life ime is around half of A1)

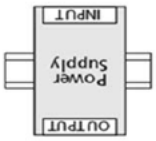
12V output

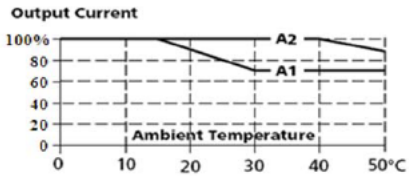
Mounting 1:





Mounting 2:





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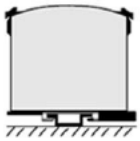

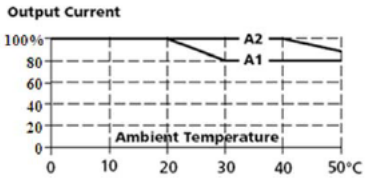

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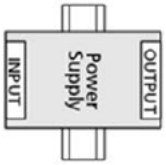

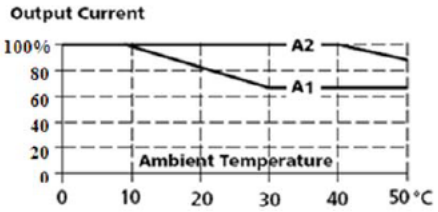

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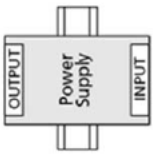
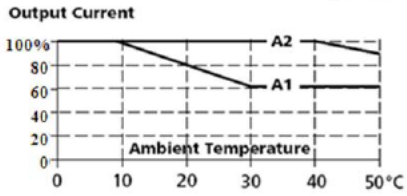
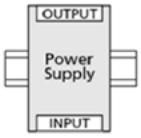
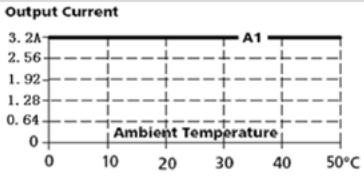




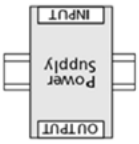
24V output

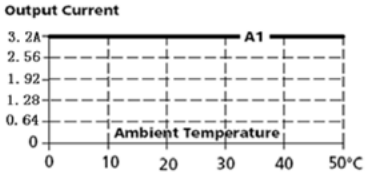
Mounting 1:





Mounting 2:





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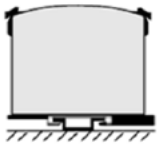

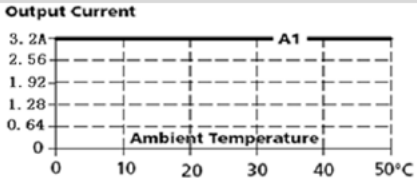

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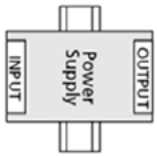

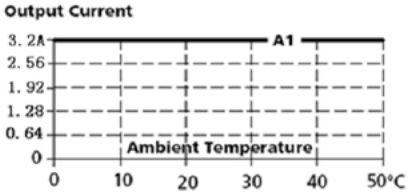

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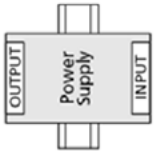
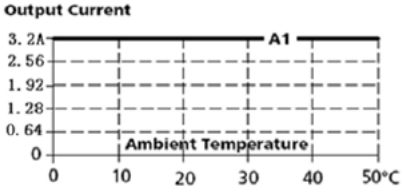
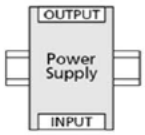
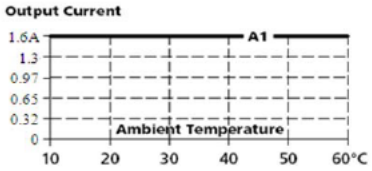




48V output

Mounting 1:





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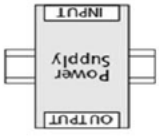

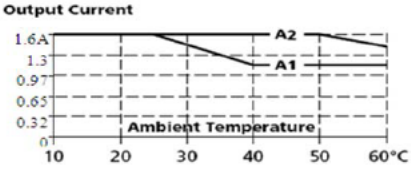

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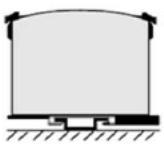

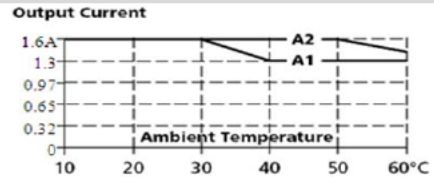

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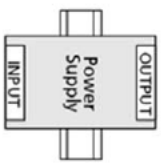

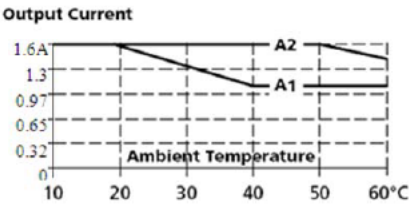

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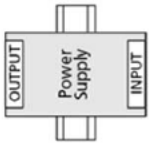
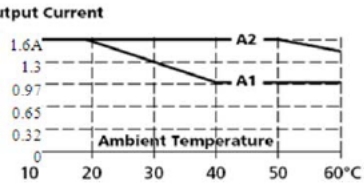
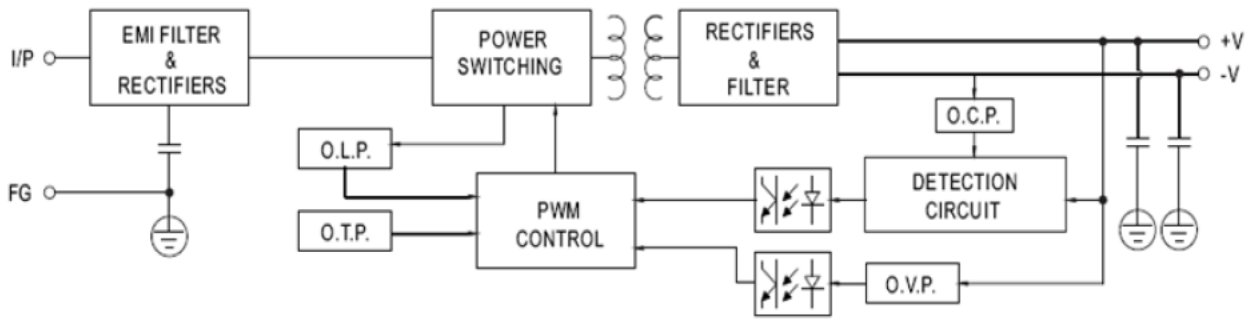




BLOCK DIAGRAM



MODEL SELECTION